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FOOD ENGINEERING

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Food Industry

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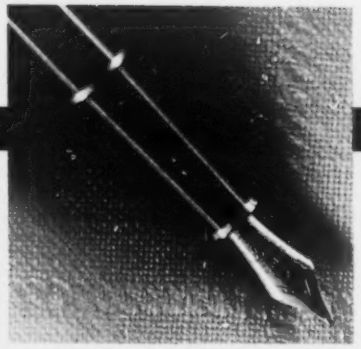

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Food Engineering's annual State of the Food Industry report examines a suddenly recession-sensitive food industry from the perspective of finance, product development, marketing and manufacturing.
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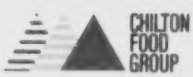

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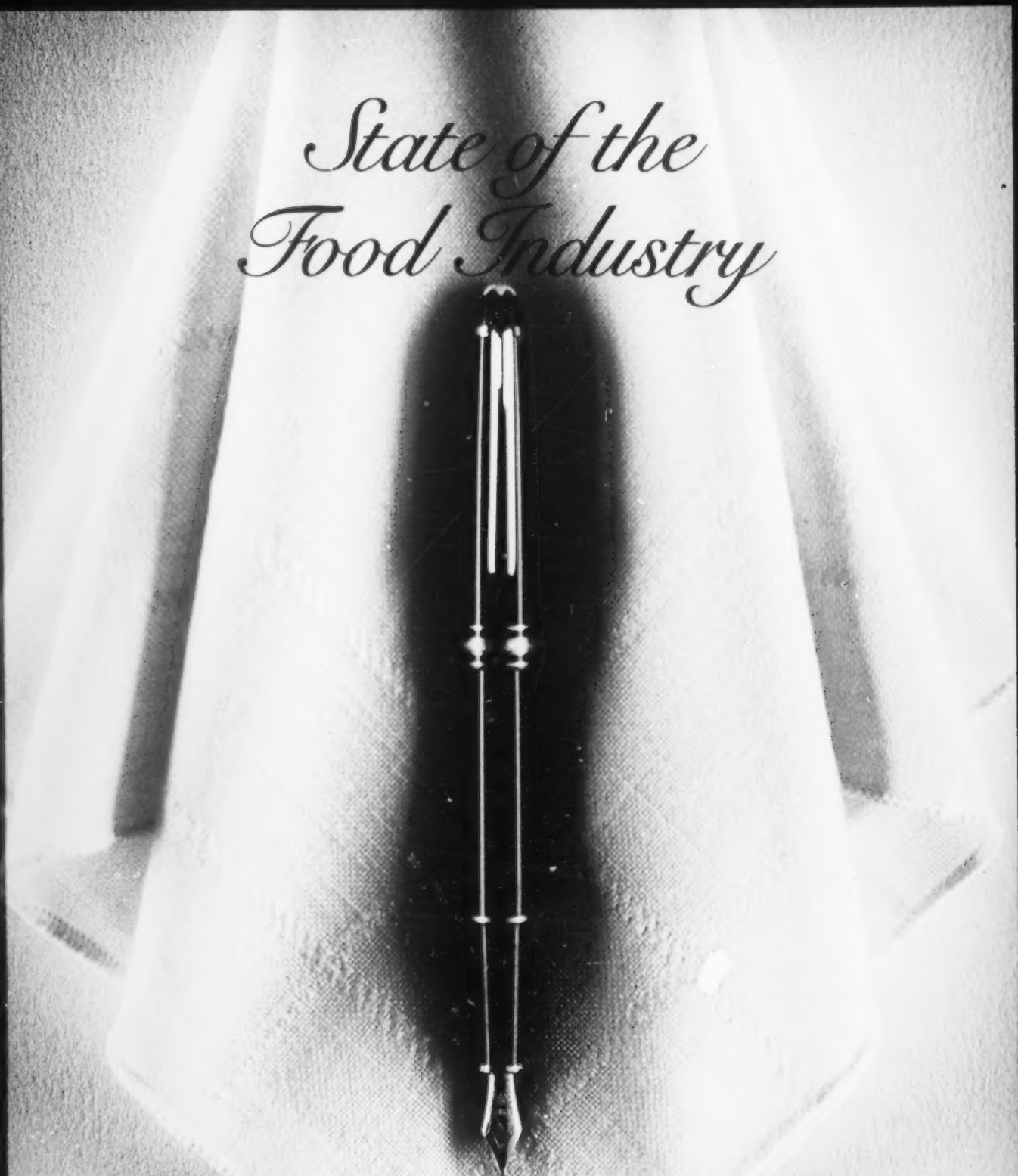
State of the Food Industry



Forced by the recession to hold the line on prices, the food industry is attempting to shore up sinking profits by reducing waste, redirecting spending and expanding operations overseas. Within this broad context, each business segment—finance, product development, marketing, and manufacturing—is developing its own recession-coping agenda.

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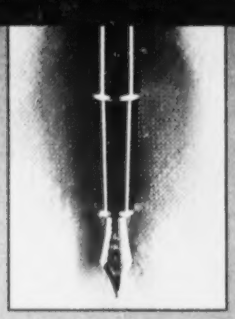


STATE OF THE FOOD INDUSTRY

Finance

One fact is crystal clear: this country is mired in a recession. Much less clear, however, is the relationship between this recession and the food industry. When asked to gauge the recession's impact, answers from industry officials ran the gamut from "none" to "severe."

The relationship is foggy for several reasons:

•First, the recession's effect on food companies has been capricious. Some firms claim that business has never been better, while others are singing the blues. A scattershot recession makes generalizations difficult.

•Second, it is difficult to separate the recession's impact from numerous other forces. For example, is a company's unexpectedly poor financial showing primarily the result of the recession, simply poor management, extensive debt or, possibly, just the returning to earth of mature business after a decade of overachievement?

"My sense is that people are attributing problems to the recession, even when not warranted," says David Rabinowitz, analyst with Kidder, Peabody & Co., New York City. "It is a convenient thing to blame."

•Third, the very arbitrariness of this recession has left its effects open to diverse interpretations. Despite differing opinions, however, certain general observations are possible.

"It's a recession where you don't see huge declines or losses," says William Leach, financial analyst with Donldson Lufkin & Jenrette, New York City. "Companies that had very good earnings prior to the recession were growing at almost 15 percent a year [11 percent in 1991]. Recent results, however, show earnings up on average of only 5 or 6 percent."

Of the 15 biggest food companies Leach tracks, profits for the year are up about eight percent—a mild slide but no disaster. More disturbing, however, is the fact that many of those companies "...have negative sales trends, actual declining revenues, caused by a combination of lackluster volumes, pricing problems, and generally negative foreign exchange rates," he noted. "If you look at Heinz or Borden or Ralston, ConAgra, Kraft an Phillip Morris, they have actually had down revenues."

While stalled domestically, companies have been able to pickup some business through aggressive expansion overseas. Micheal F. Pasquale, Hershey Foods' chief financial officer, sees rapid expansion in Europe as central to his firms's strategy.

Recessionary benefits

While the recent drops in revenues have elicited deep concern by some, others view these worriers with some skepticism.

"In fact it seems to me that in some ways, the recession has been positive," suggests Richard Elam, equity analyst with the Kemper Securities Group, Chicago. "We have seen labor and packaging costs either decline or remain stable." Also raw material costs have remained low, he observes, including sugar, corn sweeteners, almost all grains, and vegetables.

Even debt levels have been less of

Number of Food Companies Raising/Lowering Budgets[1]

	Raising	Lowering
Marketing	67	70
R&D	56	65
Automation	58	77
Salaries	31	106

[1]Out of 231 companies surveyed.

Source: FE Executive Advisory Panel

a concern than expected. While U.S. food retailers and manufacturers are have been among the most leveraged industries in the country, debt levels in both 1990 and the first half of 1991 rose only slightly, reported USDA.

While some downplay the recession's effect, others assert that the food industry in general, and certain segments in particular, have been hurt more than is readily apparent.

Roger Spencer, an analyst with Painewebber, Inc., in Chicago, suggests that among the hardest hit segments are those aswarm with private label products or with new players. For example, the recession's impact in the cheese segment (where private label brands take a back seat only to Kraft in the volume of cheese sold), has been damaging.

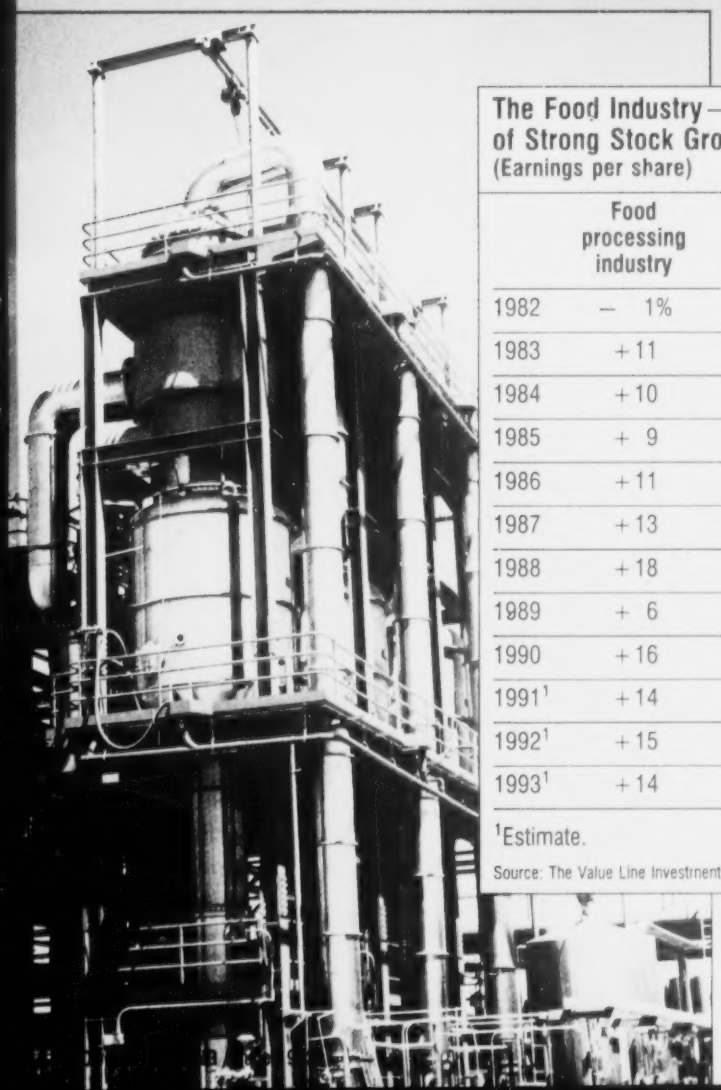
"In Kraft USA's retail cheese division, we were hit by unprecedented volatility in cheese costs," reported Michael A. Miles, Chairman and CEO of Philip Morris Companies, Inc. to the Consumer Analyst Group of New York (CAGNY). "Following three years of generally upward pressure, commodity costs declined to government support levels. Retailers used these low costs to aggressively price and merchandise private label products, resulting in volume and share erosion for Kraft."

The resurgence of private labels indicate that the consumer has become more cost conscious in his food buying habits and less apt to buy high value-added products. This increased frugality is born out by USDA figures which indicate that in 1989, consumer spending on food rose nearly six percent from the previous year. In 1991 that percent rise was only slightly more than three percent.

Trading down by consumers has particularly hurt those companies that sell specially items. But even those companies with a broad range of products are being squeezed by customers looking for low margin foods. Trading down has hurt product development as well.

"I think it is a better industry than it was 15 years ago because it is selling a lot less commodity flour and more cake," said John M. McMillin, analyst with Prudential Bache Research, New York City. "They are making more per dollar of sale: building a better brand. But in the current environment no one is has really wanted to pay up for anything." This unwillingness to spend money, this return to the basics, has halted a good deal of interesting food developments—like microwaveable single-dish vegetables and microwaveable bacon, he asserts.

The consumers' unwillingness to buy higher margin products, plus deeper discounting on grocery shelves, is causing companies with seemingly healthy production volumes to experience sharply reduced profit margins.



The Food Industry—A decade of Strong Stock Growth
(Earnings per share)

	Food processing industry	Industrial composite
1982	— 1%	—23%
1983	+11	+14
1984	+10	+23
1985	+ 9	— 5
1986	+11	— 8
1987	+13	+34
1988	+18	+22
1989	+ 6	—
1990	+16	—10
1991[1]	+14	—24
1992[1]	+15	+14
1993[1]	+14	+26

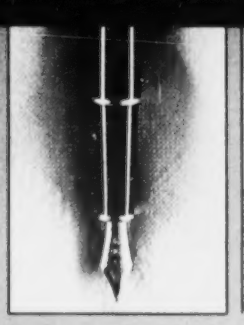
[1]Estimate.

Source: The Value Line Investment Survey.

Pricing problems

"I think in general, the industry has suffered much more price erosion perhaps than they have in other recessions; the inability to price in this recession has hurt." reported Ronald B. Morrow of Smith Barney, Harris Upham & Co., New York City.

Unable to raise prices, companies are attempting to make ends meet by cutting costs—these cost reduction measures are taking a variety of forms—reducing the payroll, for ex-



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ample, or slashing media advertising, or attempting to eliminate production inefficiencies.

"They are all trying to get to be more efficient managers of the whole system, from buying product from the farm or the elevator, to minimizing inventory, to just-in-time (JIT) delivery.... It seems to me the heat is really on to take costs out of the whole processing arena," points out Spencer.

Besides increasing efforts to cut costs by reducing waste, improving production efficiencies, and streamlining the workforce, the food companies are attempting to become more competitive at the retail level by keeping R&D budgets high, doing more product discounting, and spending more on promotions. The downside of this approach is that with so much emphasis on competing more effectively in the present, food companies could be mortgaging their future.

"Some of the companies in the fourth quarter basically eliminated media spending," points out Donaldson Lufkin & Jenrette's Leach. "My view, however, is that promotions are just price cuts; they don't build brand loyalty for more than about 15 minutes." (For an opposing view see *Marketing* segment.)

The inability to gain profits through pricing, has intensified competition not only among food processors but between processors and retailers as well. Areas of contention are: who will assume the costly chore of holding the inventory and how will promotional costs be divvied up.

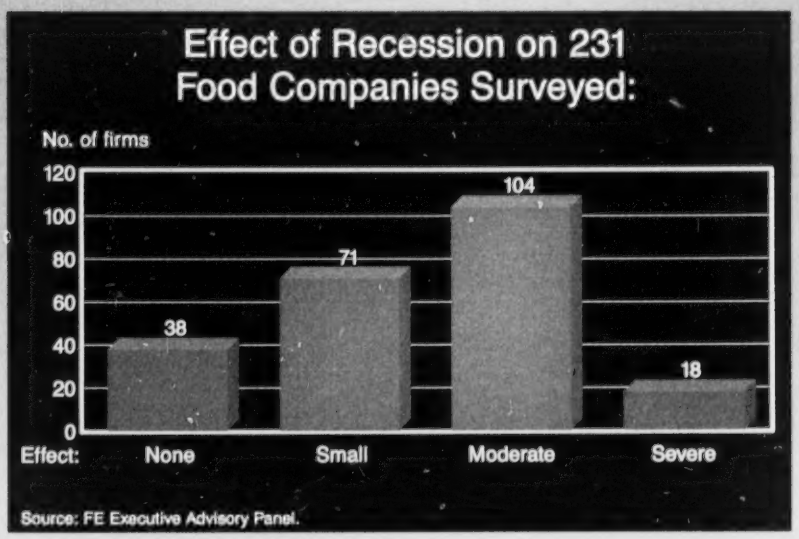
Amid these mounting problems, however, evidence is growing that the recession is easing. "We are starting to some price improvement, but it is very early," said Morrow. "The second quarter will be a difficult one, then we will start to see improvements in the third and fourth."

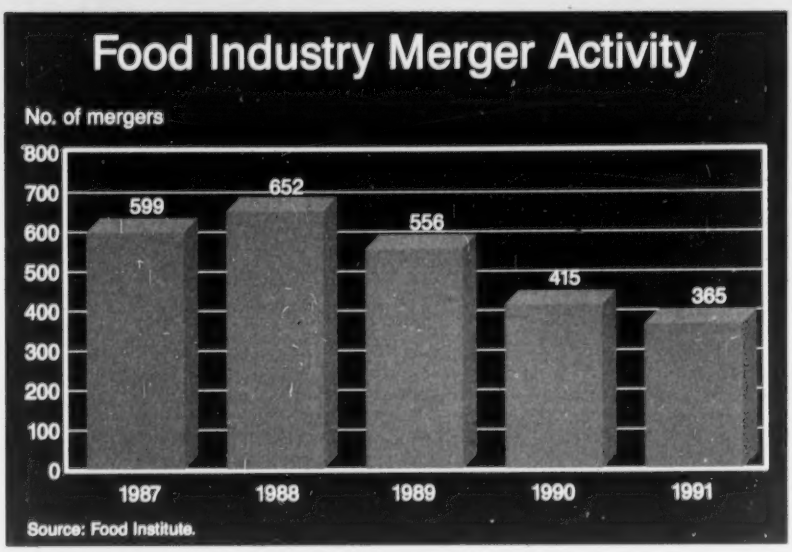
If the recession does ease, the next question is: Will it have any lasting effects? Leach, for one, believes that many of the problems which were brought to a head by the recession, will remain after it has faded.

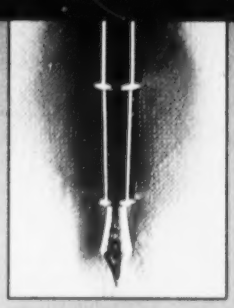
"I think that the bottom line is that these food companies won't be ten or 15 percent growers any more," said Leach. "I think the industry got spoiled and the investors got spoiled; they have had such a good decade. Most of these people think they should be growing at double digits, yet their sales are only growing 5 or 6 percent. It is almost impossible to maintain these growth rates."

Margins were artificially high in the 1980s for a number of reasons, including: massive dis-diversification – getting rid of all these peripheral operations; very favorable commodity costs; a favorable 1986 tax reform bill; and a tremendous fear of taken over that motivated managers to increase profits, said Leach.

However, by the recession, many of these benefits had about played played themselves out, leaving expectations for the '90s rather modest, compared to the spectacular run the food industry had in the '80s.







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Product Development

Although the food industry has weathered this most recent economic downturn better than a lot of industries, many food R&D budgets have been slashed. Could it be, that in these companies, R&D is seen only as a cost center, and therefore expendable?

On the other hand, according to *FE*'s Executive Advisory Panel survey, just as many R&D budgets are the same or higher than before the recession. How do you manage R&D in a recession?

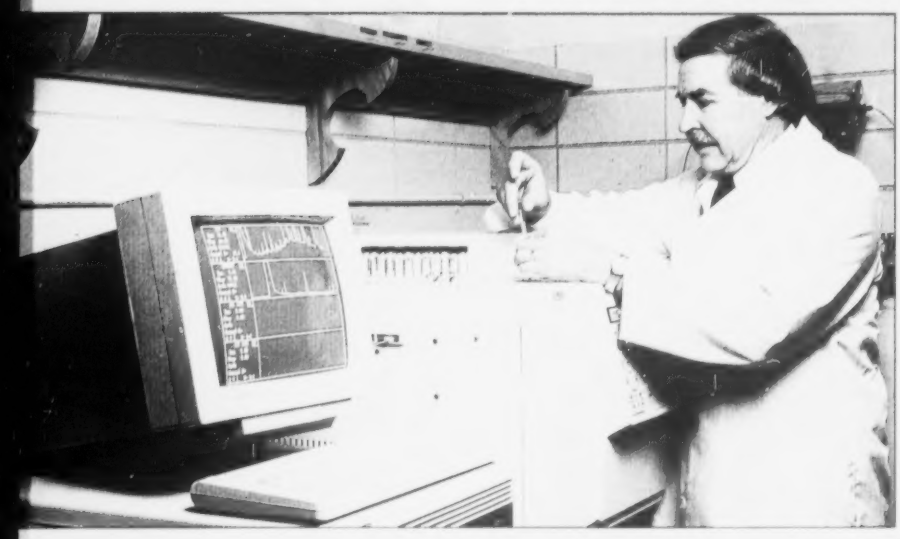
Obviously, there is no easy—or single—answer. Companies who are forced to cut R&D budgets are probably not doing well overall, commented Dr. Larry Kuzminski, vp of technical research and development at Ocean Spray. "Companies fail in good times as well as bad. The recession probably weeded out the weaker companies," he said.

However, according to our survey, many companies who reduced R&D budgets are medium to large—employing over 500 people. This can be explained in part by the corporate culture of some companies with many bureaucratic levels. They are averse to risk and need quick returns to preserve the bottom line. In these cases, long term projects are often shelved in favor of shorter-term, lower-risk line extensions.

Maintaining the status quo

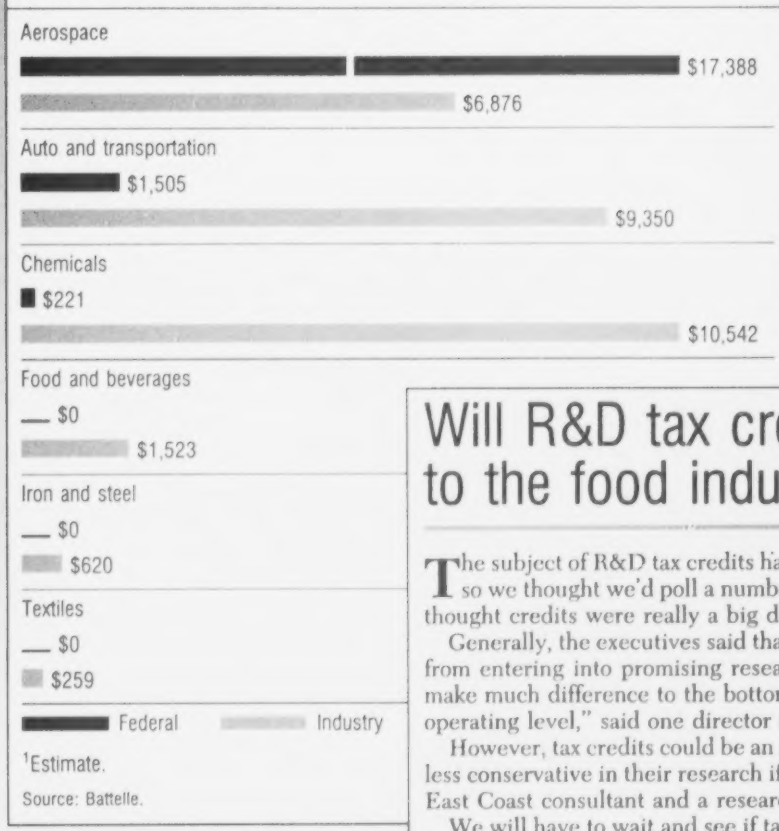
But as we alluded to earlier, most panelists reported little or no change in R&D budgets. Battelle Inc. (Columbus, OH) reports the same. "Food industry R&D spending is only predicted to grow about 1 percent, which mirrors other industrial R&D spending," said Dr. John Litchfield, research leader at Battelle, a technology management firm. "However, things will shrink in some areas and expand in others," he noted. Litchfield cited the recent workforce reductions at NutraSweet and Kraft General Foods and growth of supplier (both ingredients and process equipment) research and development.

Another reason for unchanged budgets may actually be the most simple: if economic analysts can't correctly predict conditions 12 to 16 months into the future, how can food company managers? "Last May, when we were planning our budget, we knew that we were in a recession," said Larry Kuzminski, "But we didn't know if things would get better or worse in '92." And so, Ocean Spray's R&D budget stayed about the same as the year before.



Sources of OPT in the dairy industry include the Wisconsin Milk Marketing Board and National Dairy Board. (Source: WMMB.)

Funding R&D in 1991[1]
(Selected industries shown in millions of dollars)



[1]Estimate.

Source: Battelle.

panies want to grow," he said. The most effective programs combine tactical projects that help to build the core businesses and improve profit margin with long term projects that are new for the company.

Even "Me-too R&D" has its place. Although many food development purists scorn this type of research, it can serve both short and long term goals. Chances are, a me-too product will make some money for a company, since it is a knock-off of an already successful product, but me-too products are also a way of easing companies into new businesses.

Will R&D tax credits be a boon to the food industry?

The subject of R&D tax credits has cropped up in the presidential campaign, so we thought we'd poll a number of food industry executives to see if they thought credits were really a big deal after all.

Generally, the executives said that the *lack* of tax credits wouldn't stop them from entering into promising research. But receiving credit doesn't seem to make much difference to the bottom line either. "It will have no effect on an operating level," said one director of R&D at a large midwestern company.

However, tax credits could be an incentive to take risks. "Companies may be less conservative in their research if they are compensated for risk," echoed an East Coast consultant and a research head from New England.

We will have to wait and see if tax credits provide a shot in the arm for food R&D, but just about all of the executives we talked to felt that the credits should be permanent. In crunch time, every little bit helps to keep the R&D machine humming along.

Innovate or die

"When the going gets tough, tough companies start spending," writes Brian Dumaine in *Fortune* magazine. He warns executives to steer clear of knee-jerk responses like cutting back on marketing and product development. Smart companies take calculated risks. Why? Because your competitors do!

Today, in the aftermath of mega-merger mania, stockholders seem to be more patient about returns so companies are freer to invest in research. But if your business is propelled by technology, then you must introduce new products—at the risk of losing your market share to those who do. "It is a day-to-day responsibility for any company to develop products that have a technological point of difference," asserts Ocean Spray's Kuzminski.

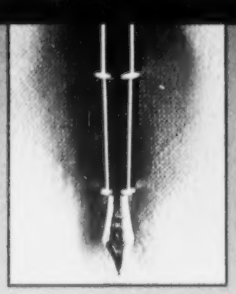
But sometimes high risk brings about a big payoff. "Boosting spending in a recession requires a killer instinct," says Dumaine. "You could be delivering the deathblow to marginal companies."

It is important to keep an eye on your competitors' R&D spending. According to Larry Kuzminski, Ocean Spray has invested in this type of benchmark study. He has found that there is some funneling away from R&D, but to him, this reflects a myopic strategy. "There's got to be both near and long term spending if com-

NIH syndrome

But all over the country and in every industry, there has been a consistent failure to link research spending and results. Many, many large companies are losing marketshare to smaller, speedier rivals. Consider General Motors and the Japanese auto industry; IBM and Compaq. The same can be said for the food industry.

Experts place the blame squarely on management's shoulders. For instance, the management of some of the largest food companies are preoccupied with short-term thinking and guaranteed "home runs." New product offerings are limited. It is also



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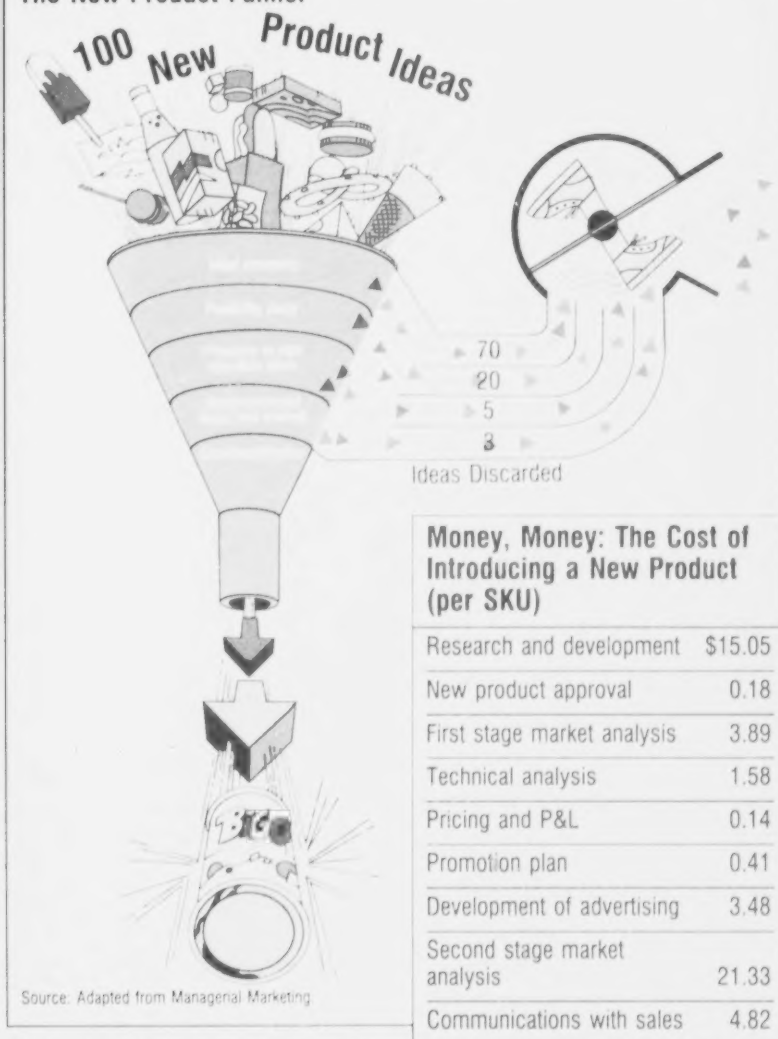


Money, Money: The Cost of Introducing a New Product (per SKU)

Research and development	$15.05
New product approval	0.18
First stage market analysis	3.89
Technical analysis	1.58
Pricing and P&L	0.14
Promotion plan	0.41
Development of advertising	3.48
Second stage market analysis	21.33
Communications with sales	4.82
Full scale production	17.91
Calls on stores	2.92
Store operations	7.49
Trade deals	36.34
Consumer communication	102.86
Monitor performance	2.23
Modify promotions	1.49
Average Cost	**222.12**

Source: adapted from Supermarket News

likely that these companies suffer from Not Invented Here syndrome—a resistance to any technology not developed in-house.

"Companies have to admit that 95 percent of research is going on outside their door," said Ken Kovaly, president of Technical Insights Inc. (Englewood, NJ), a consulting firm that aids companies in technology transfer and management. 'There is a lot of technology available through the government, universities and competitors. But too many people say 'We spend a lot on R&D, why should we spend more?' Companies have to admit they *need* it," said Kovaly.

New technology comes with its own set of caveats, however. "Technology can involve difficult choices," says Battelle's John Litchfield, "To adapt or not, to innovate or not, and the question of short-term losses vs. long term profitability."

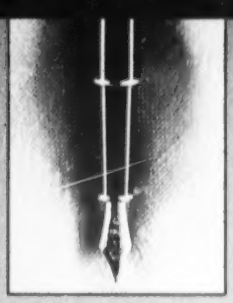
In-house attempts to develop all the technology necessary to stay ahead of the game is risky, time-consuming and expensive. Kovaly argues that no company, not even very large ones, can depend entirely on internal R&D to stay competitive. Product life cycles may be shorter and the costs of introducing new products higher, but companies need to keep a steady stream of new products flowing to stay competitive.

Other people's technology

Exploiting other people's technology is the key to corporate growth. Surprisingly, a serious technology acquisition program can cost only about 2 to 3 percent of the total R&D budget, according to Kovaly. He defines other people's technology as any incremental or radical technological breakthrough that is developed outside one's own organization. "OPT can come from a competitor down the street or an unrelated laboratory around the world."

Finding OPT is difficult, admits Kovaly, but it is feasible for any size company. Large companies can afford to have several positions devoted exclusively to technology acquisitions, but smaller companies can create in-house task forces to survey the literature and review patents. Whether large or small, operations still require three levels to operate efficiently: knowledge acquisition, technical evaluation and technology acquisition/implementation.

- *Knowledge acquisition:* Members of this group read journals, attend conferences, review patents and report their findings to the Technology Evaluation group.
- *Technology Evaluation:* These people should have advanced degrees,



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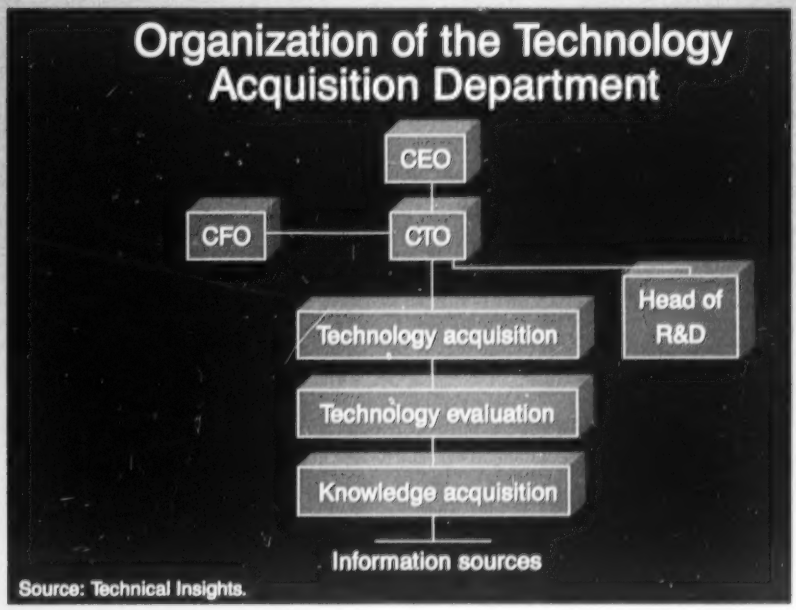
which helps them to evaluate the technical information quickly. "This group should also understand how the technologies fit into their company's business and separate the technological wheat from the chaff," says Kovaly.

•*Technology Acquisition:* This group, often part of the executive board, approaches the source of the technology, whether it be universities or consortia like the Center for Advanced Food Technology at Rutgers University in New Jersey.

Universities are plentiful, and stocked with academic talent ready for collaboration with industry for a fraction of the cost of setting up in-house teams. And suppliers and contract R&D firms are especially good for companies who are entering a new category, but eventually companies will have to break away with their own proprietary formulations. Or, companies can simply buy technology from the many companies offering licensing agreements.



Source: Technical Insights.

Strategies and Sources for Acquiring OPT

Sources (suggested strategies)
Patents (1-3,6)
Universities (2-6)
Companies (1-5)
Government (3-6)
Technical literature (6)
Science parks (4-6)

Strategies
1. Purchasing
2. Exclusive licensing
3. Nonexclusive licensing
4. Joint ventures
5. Consortia
6. Information acquisition

Source: Technical Insights

Chief Technical Officer

The advent of technology acquisition groups in food companies requires the presence of a technically trained individual on the executive board—the Chief Technical Officer.

According to Technical Insights' Kovaly, the CTO makes sure new technology improves a company's competitive position without blindsiding it with other competing products and processes.

At Borden, the Vice President of Science and Technology is considered the CTO. If one were to picture an organizational chart, the CTO, Dr. Eugene Skiest, would have direct line technical responsibility for all food products as well as dotted line responsibility for packaging and other areas related to brand development. Skiest is involved in all technology, including process engineering, and makes sure that technology gets considered at the highest level—the CEO.

"The CTO is fairly common in the chemical industry, and we have taken their cue," says Paul McSweeny, associate director of strategic R&D at Borden, who reports to Skiest. Since the inception of the technology acquisition program about five years ago, McSweeny and Skiest have been developing long term projects for the company, sometimes beyond Borden's business units. "In fact," says McSweeny, "the best ideas sometimes come from outside the food industry."

McSweeny is in charge of scouting and assessing technology, as well as determining if the technology fits in with the company's strategic plans. When they find something they like, McSweeny's group will approach the source and begin negotiations for acquisition. Dr. Skiest serves as an advisory to the executive board.

But the game plan differs depending on the technology. "If it is a technology that can be plugged right into existing businesses, management takes right over. But if it's a developing technology, then the science group works with it a little longer," explained McSweeny.

Although a CTO position is not feasible for every company, top management should be aware of the impact of new technology on their business. Nowadays, there is too much pressure on R&D staffs to come up with successful new products *not* to explore every avenue. Think of it this way, the technology on somebody else's drawing board today may be the new product that helps your company ride comfortably through the next recession.

Marketing

With its sales and marketing plans securely in place in 1991 amidst an economic downturn, the food industry's efforts to promote and sell itself held steadfast in somewhat muddy waters. Faced with economic uncertainties, consumer spending in the industry dropped off in 1991, leaving the sector to face more competitiveness and tougher marketing ploys.

The Food Institute reports that early numbers for 1991 indicate that spending for food at home amounted to approximately $306 billion, up 2.8 percent from 1990. After adjustment for rising food prices, the Institute says that it appears there was little if any "real" growth in expenditures during 1991.

"In general, I would say the recession has not affected food companies to a great degree," says Harry Rubbright, president, The Rubbright Group and Rubbright-Brody, Inc., Eagan, MN. "But for the short term, there is a slow down in some activities since many items have been re-prioritized. A project that could be number two on a list is now number eight."

There is one priority, though, that should be kept high on the list: the establishment and maintenance of a good battle plan to ward off the ill effects of recessionary times. "We were doing good at the beginning of 1991," explains Dan Nagle, vice president sales and marketing, Tasty Baking Company, Philadelphia, PA, "and then the overall downturn hit. We have a good, solid plan for 1992 in place and we will try to stick with it. Some changes may occur, but for the most part, it is a sound company-wide plan that will get us through."

Nagle explains that the company sells what is known as an "impulse item" since about 85 percent of the buyers of the Tasty products do not have the product on their shopping lists originally. The company noticed the economy taking a downturn when earnings went up and sales became flat. When employment is down, less lunches are packed, thus affecting sales of a product of this type.

But, this is not a time for sitting and waiting, as all sources contacted by *FE* agreed. Recessionary times may mean more competitiveness, but products must still be sold. "We are promoting aggressively," says Dan Nagle, "and we are out to get market share. We have also increased our couponing efforts because we feel if we promote now, we can do better overall."

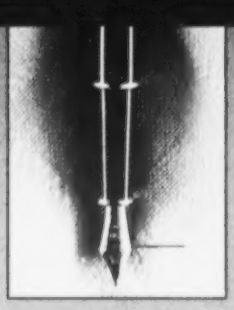
Harry Rubbright concurs by saying, "if products are not promoted, they don't sell. The basics (flour, sugar, spices, etc.) always sell, but other products need to be promoted." He goes on to explain the differences in the promotion of a microwaveable meal. A product such as Dial's *Lunch Bucket* needs promotion because of competition with other very, similiar-type brands. A product such as a

Trends and Forecasts: Food Retailing (in millions of dollars except as noted)

Item	1990	1991[1]	1992[2]	Percent change 1989-1990	1990-1991	1991-1992
Sales						
All food stores	367,827	380,333	395,546	5.4	3.4	4.0
Grocery	345,836	358,632	373,695	5.0	3.7	4.2
Meat, fish	6,789	6,850	6,919	3.9	0.9	1.0
Bakeries	5,920	6,388	6,912	8.4	7.9	8.2
Other	9,282	8,463	8,020	22.3	-8.8	-5.2
Chain food stores	206,981	215,777	224,624	5.9	4.3	4.1
Chain grocery stores	195,345	204,355	212,529	1.0	4.6	4.0

[1]Estimate. [2]Forecast.

Source: U.S Department of Commerce. Bureau of the Census and International Trade Administration



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Weight Watchers **microwaveable meal, on the other hand, may be higher priced but it is being purchased to meet a specific need and does not need a lot of extra promotion. "We are also seeing more free-standing inserts in the media," says Rubbright, "and strengths come from a company that has more clout to put out more free-standing inserts and coupons in order to promote itself."**

Dan Nagle of Tasty Baking says that the company has stayed with an advertising budget that was in place for the last few years despite the economy being in a downturn. "With advertising, there is a longer time frame for a company to see a return-on-investment [ROI]," says Nagle. "We could move money over to the promotional side, but this would be way to win the battle.

The Warehouse Club Industry: 1982-1991

Year	Number of warehouses open	% Increase	Sales (millions)	% Increase
1982	8	60	$ 366	61
1983	21	163	891	43
1984	66	214	2,053	130
1985	118	79	4,197	104
1986	209	77	7,140	70
1987	257	23	10,218	43
1988	306	19	13,808	35
1989	351	15	17,319	25
1990[1]	430	23	21,680	25
1991[1]	513	19	27,900	29
Compound annual growth rate, 1986-1991:		20		31

[1]Estimate.

Source: Stephen F. Mandel, Jr., Tiger Management, New York.

In addition to specific promotion activities, there is another medium that companies often question with regard to their sales and marketing efforts during downturns: advertising. There have been drop-offs in print advertising in the last year according to studies conducted by Donnelley Market surveys. Companies may feel their advertising dollars would best be spent elsewhere such as in direct promotion activities or discounting. Sometimes ad budgets are cut, sometimes they are not because many companies feel that advertising is the best temporary. We know from a study conducted several years ago that advertising has kept us at the top of this business. Advertising is a very necessary part of the business for us."

Sometimes, though, a company must choose between advertising and promotion if budgeting problems arise in difficult times. There is a distinct difference between the two and maintaining a balance is the best and wisest path to take. Advertising establishes lasting impressions and provides a longer term payback for its cost. It cannot be measured in the same way samples can be counted that are given out or mailed out as part of a direct promotion campaign. Trade promotion, on the other hand, is short term.

A good example of a recent successful trade promotion is related by Elizabeth D. Weinmann, vice president, account director, food and beverage marketing with the Creamer Dickson Basford agency in New York City. "CPC International just ran a coupon in the Sunday edition of the *New York Times* for a free sample of Hellman's new product, *Dijonnaise*. Consumers were so excited about the product and the coupon that they cleaned off the shelves in the supermarket. Here, we have a very effective promotion that turned out to be a winner: the compa-

Which Coupon Media Do Manufacturers Use?

Source: Donnelley Marketing

What Type of Coupons Do Consumers Use?

Source: The Roper Organization

and international consumer products division. "The company will protect its volume with competitive pricing. That means we need to take costs out of our business to match the industry's deep discounting and aggressive promotions." Waydo also indicated that Borden has centralized its marketing for improved effectiveness and control.

So, with growth flat in consumer

ny created brand awareness right from the beginning."

Another company taking an aggressive stance and using promotion in this recessionary environment is Borden, Inc., as company executives outlined performance objectives at this year's Consumer Analysts Group of New York (CAGNY) conference held earlier this year in Florida. "We are managing our North American snack business by defending the strong number two position we continue to have on the supermarket shelf," said George J. Waydo, president, snacks

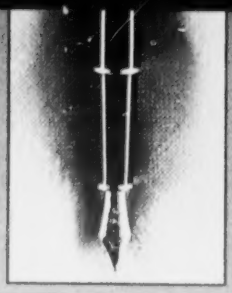
expenditures for food during the last year and the industry attempting to meet increased competitiveness and persuade consumers to "try my brand," the only question left to ask is, "Is the effort working?"

All the advertising and promotion efforts in the world will not work if the targeted party is unreceptive or does not take advantage of special offers such as coupons and discounts. "Regular network television buys just aren't that effective with consumers anymore," says Elizabeth Weinmann, "since some of the groups the companies are marketing to are not in front of the set when the ads run." She gives an example of products that are marketed to women, who, in large numbers, are not home during the day if the ad campaign is running then. "To be more effective, a company could consider a targeted promotion, say for example, sponsoring a woman's film festival where a precise, targeted audience is reached. The idea is that the event generates publicity in that marketplace as well as in publications that working women read."

And with people simply not buying like they used to, reaching an audience has just become tougher and tougher. A recent study by the Food Institute concurs with this view: new shopping habits have evolved as consumers attempt to economize during a poor economic climate. In its survey, the Institute reports that 23 percent of consumers polled indicated they were stocking up on specials, 21 percent were buying store brands instead of national brands, 18 percent were making more impulse purchases when they find bargains, and 12 percent were shopping at a discount or warehouse food store for groceries.

The industry's efforts in couponing seem to have paid off, though, according to The Food Institute's *Food Retailing Review* and NCH Promotional Services, the nation's largest coupon distributor. The service reported that 54 percent of shoppers increased their use of cents off coupons as a result of the recession. Almost 75 percent also indicated they would increase their use of coupons in the coming year.

With consumers indicating a switch to store brands more and more, marketers have increased their budgets for coupon distribution in order to keep those same consumers loyal to their brand. Free-standing inserts are used the majority of the time for coupon distribution, making up 80 percent of this traffic, according to the Review. The rate of coupon redemption and the gross national product are often considered to be inversely related: coupon redemption increases



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Adventures in the supermarket: real life shopping

The Russell family lives in Towson, Maryland, a suburb of Baltimore, and represents a slice of middle America: two working parents (Bob and Pam), four children (ages 13, 11, 5, 2), and a dog. This "slice" is often a target of the food industry's marketing and promotion efforts, so in order to see if the effort is working, *FE* sat down with the family to talk about its shopping habits.

The Russells shop in two types of stores: a regular chain and a warehouse club facility. Giant Food Inc., a full-service supermarket chain throughout Maryland, Washington, DC, and northern Virginia, is the chain store of choice for the family, according to Pam Russell. The family owns a premier membership to K-Mart-owned Pace Warehouse, located outside of Reisterstown. A premier membership costs $25 per individual per year, and an additional $10 for a spouse to have his/her own card.

"One of us goes shopping once a week at Giant Food," says Pam, "and about once a month at Pace. We used to go weekly to Pace but now we find it unnecessary to do that."

The Russells plan a menu for a five-day week and purchase their groceries accordingly. "We write a complete list and really try to stick to it," says Pam, "but sometimes there are variations, like something special that is needed for school. We do very little impulse buying. If we go off the list, it may be for something that we use and if it is on sale, we will buy it." For example, Giant Food often runs "superdeals" which are multipacked or large-size grocery items sold for a special price.

Large sizes, though, are a specialty of the warehouse club shopping phenomenon. Here the family buys many items, like juices, cereal, and basic staples (flour, sugar) and will try not to buy them in Giant Food at all. "We buy tons of cereal," says Pam. "Pace always has bigger sizes than Giant, say two 30-ounce boxes packed together in a carton. We often buy three cartons on each trip and inside of two weeks, they are just about gone." Pam and Bob both agree they have saved money by shopping at the warehouse since it "now hurts to buy something at Giant Food you know is available at Pace as well," says Pam. "Giant Food is convenient but it is often more costly."

Yet, the family is loyal to store brands from the chain as opposed to name brands available at Pace. They believe there is no real difference between store and name brands for items like bread, frozen and canned vegetables, and paper goods. And, even with coupons or Pace prices, the store brands are cheaper.

Pace stocks about 90 percent of what the family needs for groceries. However, Pace does not accept coupons, which is one of the significant marketing efforts put forth by the food industry last year. And, coupons are not very important in this household, according to Bob. "We do use some coupons, but they are a nuisance," he says. "By the time some of the items get on the list, the coupon may have expired. They should institute more instant coupons that are stuck right on the product. And, besides, look at all the paper you save."

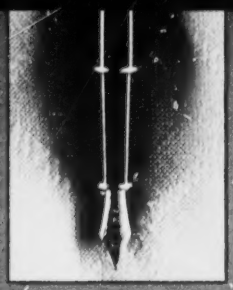
Finally, there is one member of the family that significantly affects shopping patterns: the dog, a three-year-old black Lab named Pepper. The family must buy her food at Giant Food (25-pound bag) because she refuses to eat the food Pace stocks (in 50-pound bags only). The price at Pace is excellent, making the situation more ironic. It all goes to show that even when you are a discriminating shopper, sometimes you just can't win.

as gross national product declines.

Another marketing effort put forth by the industry which consumers have taken to heart is the participation in the warehouse club arena. This phenomenon seems to have taken the country by storm as sales for this segment reached $12 to $14 billion in 1991. In effect, there is a lot of marketing potential for companies and a lot of savings for consumers in this rapidly growing market. It is believed that the clubs will gain market share at the expense of less efficient forms of retail establishments since the clubs usually do not mark up anything more than 15 percent.

Several national companies have already jumped on the warehouse bandwagon, developing and selling lines of products just for the club market. Frito-Lay, Inc., Campbell Soup (which created a new business group to handle the warehouse segment), and Borden (which sells bulk-size items in clubs) have made significant inroads into the warehouse industry.

With so many choices for consumers and so much effort put on getting and keeping them to a particular brand, it is no wonder the food industry must put its best efforts forward in the sales and marketing battles waged during recessionary times. And, let's not forget about the consumer affairs person, says Elizabeth Weinmann, because this individual may be the most important person in the product-consumer relationship. "The consumer affairs person receives the 1-800 phone calls: the complaints, the questions, the problems," she says, "and there should be more information sharing between these individuals and others in a company. For example, consumer affairs might discuss something with R&D that came from a complaint and improvements could then be made, because after all, the industry is trying to make the best product possible."



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Manufacturing

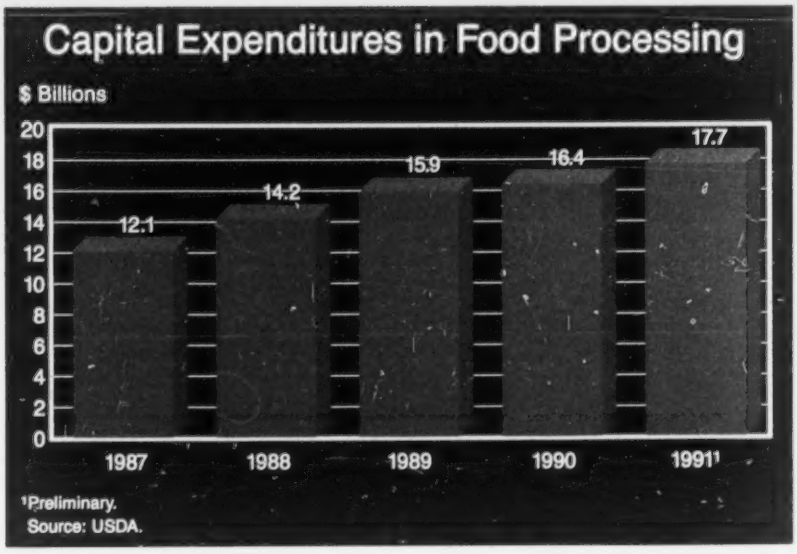
In spite of recession, capital spending for new plants and equipment in the food-processing industries reached a record $17.7 billion in 1991, up nearly 8 percent from 1990 and 11.3 percent from 1989, according to USDA's *Food Marketing Review, 1991*.

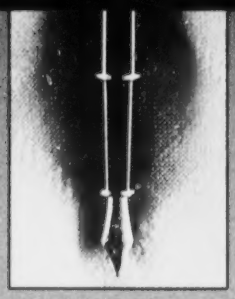
As reported in *Food Engineering's* 1992 New-Plant Survey (April '92), however, the number of new-plant and major expansion/renovation projects declined dramatically from a record 456 in 1990 to 305 last year.

Conclusion: More money is being spent on fewer plants.

Improved manufacturing productivity was a major contributor to rising food-industry profits over the past several years. In the drive to boost productivity and product quality while cutting costs—to achieve the status of "low-cost producer" and react more quickly to market trends—food processors are shuttering older plants, upgrading and expanding their best existing plants, and building fewer but more highly automated new plants of greater capacity. Examples in 1991:

- Sara Lee shut-down its flagship plant in Deerfield, IL—a state-of-the-art frozen baked-goods facility just 25 years ago but considered too costly to renovate today—and shifted its capacity mainly to a newer plant started-up in 1988 at Tarboro, NC.
- Hormel shut-down a beef-processing plant at Springfield, MO and distribution centers in Hawaii, California and Florida; expanded its Dold Foods bacon/ham plant at Wichita, KS; installed new *Micro-Cup* shelf-stable soup/entree lines at Atlanta and Beloit, WI; added precooked bacon and microwave bacon lines at Austin, MN; started-up its new *Super Select* modified-atmosphere fresh-pork process at Austin; boosted dry-sausage production by 20 percent at Knoxville, IA; and added equipment to produce microwaveable meat pies and turkey-breast entrees at Oklahoma City.
- General Mills spent $50 million to upgrade and expand its Cedar Rapids plant; plans to expand its South Chicago facility to boost cereal production by 25 percent without expanding the work force; started-up a new $100-million-plus, 450,000 sq.-ft. plant at Covington, GA capable of producing all "Big G" cereals with a total staff of 125; and is starting-up another new, $128-million plant this month at Albuquerque, NM.
- Borden, which "compressed into two-and-a-half years a massive worldwide reconfiguration that would normally take five to seven years to complete" by consolidating 45 older plants into 23 "hyperplants," added three new hyperplants (including a $100-million-plus pasta plant at St. Louis) and expanded eight others to hyperplant efficiency. The company shut-down or sold 14 older dairy plants and consolidated dairy-products production at five.





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According to USDA, the number of food-processing plants in the U.S. declined over the 20-year period 1967-87 by more than 36 percent—to 20,624 in 1987, the latest year for which government figures are available. But after the wave of mergers, acquisitions, consolidations, restructurings and leveraged buyouts that swept the industry during the late '80s and early '90s, that figure has obviously been reduced.

U.S. Investment in Foreign Food Industry vs. Foreign Investment in U.S. Food Industry (millions of dollars)

	1985	1986	1987	1988	1989	1990
U.S. investment overseas	9,252	10,968	12,682	13,281	13,464	15,961
Foreign investment in U.S.	10,710	12,147	16,004	16,437	17,669	18,738

Source: U.S. Dept. of Commerce

Food Engineering's 1992-93 *Directory of U.S. Food & Beverage Plants* lists 11,881 plants employing 20 or more people. These plants account for 94 percent of all U.S. food-manufacturing activity. *FE's* estimate: There are currently no more than 12,640 food/beverage processing plants in the U.S.—*down another 39 percent in just five years!*

Construction trends

According to *Food Engineering's* 1992 new-plant survey, red-meat plant projects surpassed poultry-plant projects for the first time in several years, suggesting that the poultry industry is near capacity as meat processors develop more value-added, reduced-fat products in an effort to recapture lost ground.

Another trend revealed by *Food Engineering's* 1992 new-plant survey: a surge of major plant expansions in agribusiness industries such as starch, sugar, corn syrup, soy-protein and edible-oil processes.

Few sugar-plant projects were commissioned during the decade 1978-88 after several high-fructose corn-syrup (HFCS) plants were built and HFCS replaced sugar in many applications, observes Richard T. Gadomski, chairman and CEO of The PSI Group (Memphis), which completed more than 40 food-plant projects last year. But rising demand for value-added products and the need to improve ROI sparked the need for greater capacity over the past three years. Refiners such as Savannah Foods, Minn-Dak Farmers Coop, Amalgamated Sugar and Holly Sugar increased plant capacity by installing new molasses-desugarization technology, which boosts extraction efficiency of sugar from beets by 10 percent (for nearly 90 percent yield) and reduces seasonal downtime by extending production beyond the annual "campaign." Refiners can now store molasses and extract more sugar when the campaign is over. New plants are few but bigger and more capital-intensive. Example: Western Sugar Company's new $36-million refinery at Scottsbluff, NE, slated for startup next month (July '92) and "which cost more than Tate & Lyle paid for the entire company 10 years ago," Gadomski observes.

The advent of starch-based fat replacers has created "a big flurry of starch projects," Gadomski adds. PSI currently has five starch projects underway, including three for National Starch & Chemical Co. and one for Grain Processing Corp. Other major starch projects include A.E. Staley's expansion at Loudon, TN, Cargill's plant expansion at Memphis, and the $35-million Penford Products expansion at Cedar Rapids.

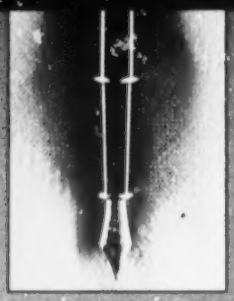
'World-class' plants

According to the 1990 "benchmark study" conducted by A.T. Kearney Inc. (Chicago) of more than 100 food plants operated by 40 companies in North America and Europe, today's "world class" food plants are eliminating the traditional quality-control function, making operators more responsible for in-process quality, and applying Total Quality Management (TQM) for continuous productivity improvement. The best companies are also:

- Applying distributed control systems (DCS) to integrate process, quality and production controls;
- Flattening plant organization by three or four levels;
- Widening supervisory control to ratios like 25:1;
- Boosting the ratio of hourly to salaried people by 6 or 7:1;
- Establishing self-directed, team-oriented work forces;
- Establishing vendor partnerships.

The study included firms such as Kraft General Foods, Campbell Soup, Coca-Cola, Heinz, Kellogg, and Sara Lee. Following the first benchmark study in 1987, the 1990 study assessed each company against the original study in 14 areas such as quality, customer service, costs, technology and manufacturing flexibility. According to Kearney Vice-President William H. Windle, some clear leaders emerged in 1990. Today's best plants have:

- Reduced overall costs by 9 percent, as compared to a rise of 1.4 percent in the average plant;
- Reduced material costs by 5 percent, as compared to a rise of 1.6 percent in the average plant;
- Reduced value-added costs by 10 percent, as compared to no gain by the average plant;
- Reached capacity utilization of 75 percent, vs. 50 percent in the average plant;
- Achieved product changeover online in 10 minutes, vs. 48 minutes in the average plant;
- Automated 90 percent of their production lines, as compared to 40 percent in the average plant;



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- Reduced raw-material inventories to five days vs. the average 14, and finished-goods inventories to five days vs. the average 30;
- Replaced more labor with capital: Capital expense is 13 percent of manufacturing cost in the best plants vs. 7 percent in the average plant.

Strategy, technology trends

TQM programs established by major food processors embrace a wide range of manufacturing strategies. The elements of Campbell's Total Systems Approach (the manufacturing part of its TQM system) interact "like the ingredients in gunpowder," said Vice-President/ Manufacturing Francis A DuVernois at the 1991 NFPA convention in Chicago. "Using any one or two alone... will not achieve the same overall result as you might if all are used together, in harmony. That is when you get explosive results!"

Common denominators of TQM systems: They are considered never-ending *processes*, not programs; require *management commitment* to succeed; are dedicated to *continuous improvement* and incorporate concepts such as:

- *Computer-integrated manufacturing (CIM).* As reported by *Food Engineering* (Feb. '92), open architecture, industry standards and vendor partnerships are lowering costs, enabling larger food processors to evolve more quickly into enterprise-wide CIM.
- *Flexible manufacturing systems* capable of producing several different products and/or package sizes on the same line with minimum changeover time. Examples: Extrusion, where several different cereals, snack foods or pet foods can be produced on the same equipment by simply changing the die and/or screw flights; roll-on/roll-off equipment such as used to vary pasta production or change snack flavors on the same line; form/fill/seal packaging machines which can fill different products in bags of varying size. "The total volume of food production is increasing only marginally, yet thousands of new products are introduced every year," observes Peter Clark, president of Epstein Process Engineering Co. (Chicago). "This means shorter runs of individual products, requiring flexible systems." But the idea of flexibility, which emerged from the discrete-manufacturing industries, can mean different things in continuous or batch-continuous food processes, Clark adds. "What's right for one company is not necessarily right for everybody else."
- *Just-in-time (JIT) manufacturing and distribution.* The Kearney study assessed JIT on the basis of four standards. The best plant in the study had reduced: *raw-material delivery time* by 44 percent as compared to the industry average of 22 percent; *setup time* by 34 percent as compared to the average 18 percent; *lot-size reduction* by 24 percent vs. the average 14 percent; *inventories* by 44 percent vs. the average 23 percent. Latest development in JIT: The *Quick Response* system developed by efficient market services, Inc. (Northbrook, IL), now being implemented by Kroger Company's Columbus and Nashville divisions to transmit scanning data from individual supermarkets to major processors for quick store replenishment.
- *Statistical process control (SPC),* which empowers the operator to make production and quality-control decisions on-line, boosting JIT production and process flexibility, elimi-

Total Manufacturing Systems Approach

Employee Involvement: Quality circles, Task forces, Work groups, Operator control
Just In Time: Changeovers, Low inventory
Vendor Involvement: Select suppliers
Preventive Maintenance: Reliability, Flexibility, Employee ownership
Improved Communication: Meetings, Checklists, Interpersonal skills
Quality Assurance: Job certification, System appraisal
Customer Involvement: Service levels
Statistical Process Control: Control charts, Prevention, Capability

Source: Campbell Soup Co.

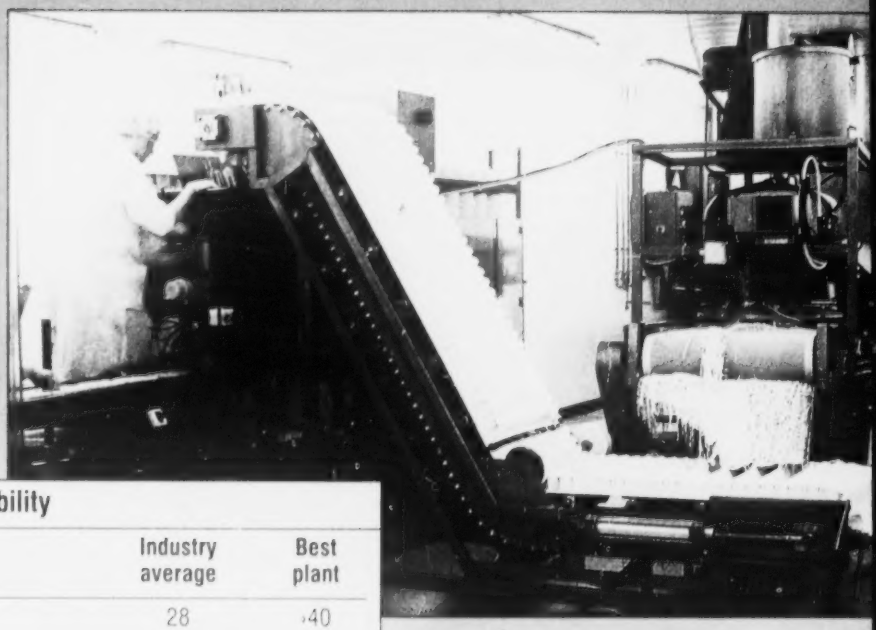
nating many QC-lab functions, and reducing the need to inspect finished products. SPC allows the operator to adjust process variables before they go out of spec, but detects these variables only after the fact. Next innovation: *Predictive control*, which applies artificial intelligence to predict process variables based on product formulation and adjusts these variables *before* processing, observes William A. Wheeler III of Coopers & Lybrand's Center For Manufacturing Technology (Burlington, MA).

• *Self-managing production teams* which allow production, quality, maintenance, management and training decisions to be made at the operator level and encourage people to work at their full potential. Team-based management is not limited to large food companies, notes Wallace W. Graham, a former Frito-Lay plant manager and team-management pioneer who now operates his own team-management consulting firm in Tempe, AZ. Example: Graham is setting-up a team-management system for a new Wilsey Foods edible-oil products plant employing about 40 people at St. Joseph, MO. Reasons for growing acceptance of team-based management, says Graham: 1.) To use "people assets" to best advantage and for greater efficiency; 2.) Productivity gains demonstrated by U.S. plants which have implemented team management; 3.) To relieve "overwhelmed" managers by delegating decisions to the right levels. One misguided motive, Graham cautions: To lower labor costs and eliminate middle-management levels. "That may be something you get out of it, but it shouldn't be the driver," he adds.

• *Time-compression strategies*, to shorten new-product development time. Several were outlined by executives from Kraft USA, Campbell Soup and J.M. Smucker at the *Food Plants '91* conference last fall in Dallas. Common denominator: Multi-disciplinary teams which take a product from concept to commercialization.

• *Partnerships*, with suppliers and other food processors, to develop new technologies and upgrade manufacturing efficiencies. Examples of American *keiretsu*: The Unilever/Hewlett-Packard OpenCIM development effort; the General Mills/Nestle *Cereal Partners Worldwide* venture to produce and distribute Big G cereals in Europe; the Kraft General Foods/Allen-Bradley/Hewlett-Packard/Bradley-Ward development of *Network DTL HP-UX* open-system architecture; the Central Soya/Mitsubishi joint-venture in the Indiana Packers plant at Delphi, IN – global in scope as the first U.S. meat plant built to EC specifications, with Mitsubishi handling Pacific Rim distribution.

The recessionary pressures that are causing firms to seek more productive manufacturing strategies have initiated revisions of marketing and R&D strategies as well. As the recession begins to ease, those companies most successful at maximizing efficiencies in these areas will be best able address the increased competition predicted for the remaining decade. ▲



One good example of manufacturing flexibility is roll-on/roll-off equipment used to vary types of pasta produced on the same line. (Source: Food Engineering.)

Summary of Manufacturing Flexibility

	Industry average	Best plant
Products per line (SKUs)	28	›40
Changeovers per line per week	7	› 7
Percent of SKUs that can be run on multiple lines	24	80
Weighted average changeover time (minutes)	48	‹15
Average manufacturing cycle time (days)	2.6	‹ 0.5
Product mix cycle time (days)	3	‹ 2

Source: A.T. Kearney, Inc.

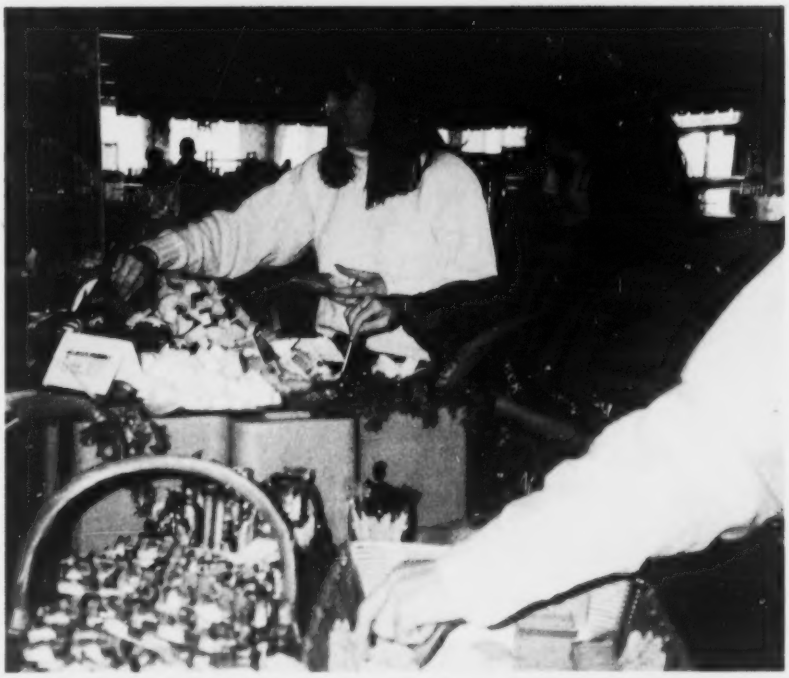
OPPORTUNITIES AMID HEADACHES

The key to breaking into food service is to be attentive to what the industry needs and offering solutions that you can deliver.

PATRICIA M. DILLON
SENIOR ASSOCIATE EDITOR

When you get lemons, make lemonade—this is an attitude food manufacturers must adopt if they want to break into food service. By finding ways to help food service operators overcome their problems, food companies can get a piece of the $261.8 billion food service market. Some of those problems experienced by food service operators include: labor shortages, government regulations, a sluggish economy, and simply filling food service needs.

Food service operators are facing a dwindling labor supply as the number of qualified workers needed outstrip the supply. The National Restaurant Association (NRA) estimates that 200,000 jobs in restaurants alone remain unfilled. As a remedy, food service operators are seeking non-traditional workers, such as the handicapped, and senior citizens and are automating as many jobs as possible. Anything that saves labor is a welcome solution.



Villanova University Food Service seeks to fulfill student needs in both traditional ways, such as special events, and in new ways, such as asking students for suggestions. (Source: Villanova University Food Services Department.)

Food manufacturers have met this challenge through technologies that not only reduce labor needs, but offer better quality food. There is more widespread use of vacuum packing and cook chill technologies that allow food to be cooked in a central commissary, packaged, then shipped to individual operations. Saving hours of prep time, cooks need only to heat up pouches of food and serve.

The slowdown in the economy has put the squeeze on food service oper-

FOODSERVICE

Trends and Opportunities in Food Service

- 1992 sales are expected to drop 3%.
- Use of substitutes for high fat ingredients will increase.
- Beef entrees comprise 75% of sales.
- Demand for vegetarian dishes will increase.
- Chicken and fish continue to be common alternatives to beef.
- Broiling and baking are in, while frying is out.
- Menus will highlight "light" sections.
- Hamburgers will account for $36.5 billion in sales in 1992.
- Burgers remain as biggest seller in fast food segment with 47% of sales.
- Greatest growth expected in Mexican, pizza and sandwich outlets.

Source: SRI International.

ators, with sales expected to drop three percent, according to SRI International. "Consumer spending will remain sluggish, and value expectations will continue to rise," said a report completed by Technomic, Inc. for the International Food Service Manufacturers Association (IFMA).

Although jumpstarting the economy is beyond food companies' lemonade-making capabilities, a number of new food products add to the consumer's perception of value. To effectively meet this challenge, food companies must pay close attention to what consumers want—and the list is remarkably similar to what retail food customers want: convenience and a "healthy" slant.

Healthy items are increasingly being found on fast food menus. Dry salads and skinless poultry are offered by 78 percent of the chains surveyed by the NRA in 1991. Reduced calorie salad dressings were sold in 74 percent of the chains; margarine, 67 percent; grilled chicken sandwiches, 59 percent; and whole grain breads or muffins and fresh fruit, 48 percent. Low-fat frozen yogurt, low-fat mayonnaise, low-fat fruit-based desserts and egg substitutes were offered in one third or fewer establishments.

Combining both value and health goals spurred Wayne Farms, Duluth, GA, to develop *Chicken Pizzazz*, cajun chicken pizza topping. "Chicken is the next focus for pizza chains because it is healthy and versatile," said Michelle Fryar, assistant marketing manager, Wayne Farms. Grilled, broiled chicken and chicken sandwiches have become more popular: ironically, so has fried chicken. It seems while there is a general healthy trend, people will stick to old favorites, like fried chicken and fried seafood. Buffalo wings and chicken fingers have also been a major boost to chicken selections on the menu.

Getting back to the health wave, General Mills Foodservice introduced food service portions of its *Total, Cheerios, Triples* and *Wheaties* cereals that are 60 percent larger. GM also unveiled a new low-fat muffin mix for food service operators in response to a 28 percent increase in muffin sales over the period from 1986 to 1991. *Gold Medal Low-fat Muffin Mix* needs only water and allows operators to incorporate additional ingredients to create signature muffins. Ingredients that can be added include: spices, honey, bran, cornmeal, fruits or vegetables.

Marriott Management Services (MMS), Washington, DC, serves over 3,200 clients that include corporations, colleges, universities, school districts, health care, facilities management and child care. Anne Hill, vice president food and beverage for MMS, outlined a few trends:

- *College and University* students want more vegetarian meals and a better understanding of where food products come from, for instance, dolphin-free tuna is a priority. MMS and Villanova University have bottled water available to students.
- *Industry's* CEOs are falling victim to stress-related ailments and are requesting reduced-salt, -cholesterol, and -fat dishes.
- *Health Care* is fully focused on nutrition and is enhancing food presentation in hospital guest dining areas used by staff and visitors.
- *Nursing Home* programs are using pastry piping equipment to display pureed foods more attractively.

Marriott also promotes strong vendor-partnerships with 27 branded

products, such as *Minute Maid, Dannon* and *Pepsi*. Recently three vendors, (Pillsbury, General Foods and M&M Mars) combined resources to present a three-hour seminar on new dessert concepts for 350 Marriott associates, said Hill. Chefs from Pillsbury and General Foods taught the seminar, which was held in four cities: New York, Los Angeles, Chicago and Washington.

Besides providing new ideas, food companies must be aware of the possible effects of government regulations on food service. At this point, it remains unclear whether the food service sector will be covered by the Nutritional Labeling and Education Act (NLEA), according to a spokesperson from the NRA. "Most restaurateurs we have talked to say they would have to eliminate common descriptor terms like 'fresh,' 'light,' or 'reduced' from their menus because, as defined by FDA, they are unworkable for food service settings," said William P. Fisher, who delivered testimony on behalf of the NRA. The association wants separate regulations from the food manufacturing industry.

What does this have to do with you as a food manufacturer? Be aware and be ready for it! Food service operators report time and time again that they will only work with companies that are aware of their problems and offer solutions. This leads to another important point: Food companies can offer solutions, but they must be ready to deliver what they promise. A Pennsylvania baker had promised that he could deliver 2,000 fully-baked stuffed pitas to Villanova University Food Service, said registered dietician Carol Fagan. However, when the pitas arrived, they contained unexpected processed bacon bits, rather than the real thing. The pitas were rejected by the students and the baker lost the account.

Another area that is getting more attention from food service operators is recycling. McDonald's has launched a recycling program that it acknowledges is only successful as a result of the efforts of its suppliers. Rubbermaid, Winchester, VA, has collaborated with McDonald's and TriAce to source behind-the-counter low-density polyethylene (LDPE) film and high-density polyethylene (HDPE) rigid packaging. The material is converted into ready-to-mold raw pellets. Rubbermaid will use this reclaimed material at levels of 25 percent in its products and refuse containers it manufactures for McDonald's. Rubbermaid calls the program the most comprehensive institutional recycling program in the country since McDonald's provides both the source and market for the recycled products.

Supermarket frontier

A further refinement of this theme is demonstrated at Genuardi's Supermarkets, Norristown, PA. Supermarket delis are the new frontier in food service and smart companies are providing the service supermarkets want. While supermarket delis still represent a modest segment of total food service, real growth in 1991 was a healthy 6.5 percent, with retailers buying a total of $3.1 billion in food service merchandise, according to Technomic, Inc.

Bob Cappuccio, deli specialist at Genuardi, works with Kimberly Newhart, vice president administration, Newhart Foods, Allentown, PA, to develop prepared foods, such as wet salads, desserts and entrees. Each supermarket chain wants to develop its own prepared food products to make it unique compared to deli products offered by other chains, said Newhart. "Chains are tired of me-too products," she added.

Newhart helps supermarkets develop signature products just for that chain. A recent example is when Genuardi's Cappuccio wanted to spice up a macaroni salad and use larger chunks of vegetables in another type of salad. A total of six different salads were made and given a month-long test in two or three Genuardi supermarkets. "Four or five salads will be eliminated and we'll further develop the sixth, based on in-store

Category	Purchases (Billions)
Quick service	$25.6
Restaurants	26.5
Convenience stores	2.3
General merchandisers	.64
Supermarket delis	3.4
Lodging	3.3
Recreation	3.2
Business	9.5
Health care	5.8
Vending machines	8.0
Primary and secondary schools	5.0
Colleges/universities	3.2
Airlines	2.4
Total	**106.8**

Source: Technomic, Inc.

Goodbye mystery meatloaf, hello two-percent milk

Remember the days of mystery meatloaf at the college cafeteria? Well, meatloaf has gotten the boot while two-percent milk and a wider selection of low-cal salad dressings have taken its place at Villanova University dining halls. Student input is taken very seriously and much of what students have to say has been integrated into the university's food service menu, according to Bill Stevenson, manager and Carol Fagan, nutritionist at Villanova University Food Services Department, Villanova, PA. The department serves 20 meals a week to 3,228 students.

Suggestions are written on napkins and tacked onto a suggestion bulletin board at the entrance to the dining hall. Stevenson also has excellent rapport with students which quickly becomes evident to a visitor as students tell him what they think. Some suggestions are completely subjective, such as the weakness or strength of the coffee. However, if Stevenson finds a substantial number of students confirming a suggestion, he'll make a change.

Meanwhile, student comments have resulted in the selection of low-cal salad dressings being increased from one to three, the addition of skim milk, more servings of chicken meals and low-cal desserts, such as *Weight Watchers* ice cream. The regular fat versions are available along side the low-fat.

Fagan meets with students once a month for an hour to find out what they want. A representative from each strata of college society is present: athletes, scholars, party animals, artists, and "the average student."

College dining halls run on a tight schedule. Meals are served at specific times and any company supplying a college food service organization must deliver product exactly when promised. Generally, dining halls have all they need to prepare meals a day in advance, however, produce for the salad bar and fresh bread is delivered daily. Companies delivering on a daily basis arrange a back-up system in the event the truck breaks down enroute.

An interesting quirk of life in college dining halls today is the increased preference for cold cereals—morning, noon and night. Stevenson said when he first noticed a run on the fifteen varieties of sweetened and unsweetened cereals, he observed whether students slipped the boxes into their jackets for a later snack. But he was surprised to see that the cereal is consumed with milk on the premises. Sometimes students will eat cold cereal as their meal or eat it after their lunch or dinner. *Apple Jacks* is the runaway favorite, he added.

Stevenson was enthusiastic about the coffee dispensing machine that uses liquid coffee concentrate rather than grinds. It is easier to maintain and reduces the need for a person to attend to coffee pots. Students also drink a lot of iced tea and other powdered beverages. Stevenson would like to see a more efficient way to mix the beverages rather than using five gallon containers that are poured into the dispensing machines.

Food Service Managers From Villanova Want:

- Cartons and boxes that clearly state the portion size and number of servings. (Stating poundage just doesn't help.)
- Shelf life labeling WITHOUT CODING! (Also, be sure to clarify whether it is a sell-by or consume-by date.)
- More resealable pouches.
- If you claim packaging is easy to rip open—make sure it is. (This is important when an operator must open 1200 bags.)
- Offer more bulk packaging containing 10-12 individual pieces. (Again, appreciation for this increases when serving 2,000+ diners.)
- Reduce the amount of packaging. (There is too much plastic wrap, boxes, portion papers, etc.)
- Put nutritional information on boxes so food service managers can show students who ask about this.
- Does anyone have a way to quickly chop tomatoes for tacos? (Without turning it to mush as most choppers will do.)

Source: Villanova University Food Service Managers.

suggestions," said Cappuccio.

Cappuccio said he gets most of his ideas for unique deli offerings by traveling to different parts of the country. Genuardi's has tried balsamic vinegar-based salads, mozzarella cheese salads, parsleyed potatoes and orzo salads. However, "most people now look for the basics," Cappuccio said. Fried chicken, macaroni and cheese, and lasagna are the shoppers' well-established favorites, he said.

Cappuccio prefers to buy from suppliers who can offer fresh foods without preservatives since consumers prefer natural-sounding ingredients. However, people are not scrutinizing the label as closely as they were two years ago, he said. Taste has a priority over low-cal and low-salt claims, he

Hot fries, extruded as you wait

Although healthy foods are on a roll, people always like to revert to a few fattening favorites. And not everyone buys into the healthy eating trend as shown by the fact that fast food joints report that more than 23 percent of their sales are from french fries. This translates to $12 billion annually, according to Martin Balan, chairman of the board for Adelaide Robotic Technologies, Inc., Miami, FL. He has come up with a way to cash in on America's passion for fried tators and convenience—with a french fry vending machine.

Sam Balan, aerospace engineer who helped create the lunar module, designed the unit that cooks up a fresh batch of french fries every time. It works by reconstituting dehydrated potato, extruding it, and dropping the extruded pieces into hot canola oil. A customer gets approximately 33 fries for a buck.

By the summer, french fry vending machines will be popping up on military bases throughout the world, and agreements have been made with distributors in California, Pennsylvania, Canada, England, and France. Units are slotted for movie theatres, hospitals and schools.

Vending machine sales projected to increase 1.5 percent from 1991's $7.6 billion, according to Technomic, Inc. French fries join pizza (see *FE*, April 1992, page 106) as being America's top choices—now available at a touch of a button.

added.

Ethnic specialities have been a great success in the fresh deli section, said Cappuccio, with Italian foods being the most popular. However, there is room for improvement. He would like a food company or packaging supplier to come up with a way to package fresh Chinese and Mexican entrees in microwaveable containers. Entrees that are microwaveable add to the customers' perception of value and increases sales of these items, he added.

The Cryovac Division of W.R. Grace & Co., Duncan, SC, has set up a retail sales plan to reach consumers looking for pre-cooked and ready-to-cook meat products. "Market managers recognize that the easier they can make it for their customers to cook meats, the more meat they can sell and at better margins," said Steve Karinshak, director of Cryovac Fresh Meat Packaging Systems. However, Karinshak recognizes that the retailer has little time to prepare these products. "The answer, we believe, will be to further centralize the fabrication of meats and to deliver more value-added products to the backroom that can go directly into trays or even directly into the case," he said.

Marinated products are the most frequently offered prepared meat products offered by retailers, Karinshak said. Marinated fajita strips, kabobs (beef, lamb and chicken), stuffed peppers (cabbage, mushrooms and cajun meat patties), marinated or stuffed pork chops and chicken are very popular.

Other more elaborate products include: rolled flank (stuffed with blue cheese), rolled pork (made with three cheeses, two types of ham and pork), cheeseburger mignon, spiced ground chuck, and adding bacon to patties.

New concepts that are coming from Marriott include display cooking of pastas and oriental cuisines, regional American cooking, strong emphasis on ethnic cuisine (with Indian, African, Spanish, Mexican, French and Carribean foods scheduled over the next few months) and vegetarian foods (such as tofu, veggie burgers and ethnic veggie), said Hill.

The opportunities for food companies in food service is limited only by your imagination. Take note of what food service operators want and what they need. With creativity and energy, you can change food service operator headaches into profitable markets for the operator *and yourself.* ▲